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POLLUTION REPORTS
Report all spills of oil and hazardous substances to the National Response Center via 800-424-8802 (toll free) or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

WARNING
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

NOAA VHF-FM WEATHER BROADCASTS
The National Weather Service stations listed below provide continuous marine weather broadcasts. The range of reception is variable, but for most stations is usually 20 to 40 miles from the antenna site.

Oahu	KBA 99	162.55 MHz
Hawaii	KBA 99	162.55 MHz
Maui	KBA 99	162.40 MHz
Kauai	KBA 99	162.40 MHz

CAUTION
CHANGES in SEAWAY
Mariners are advised that submarine operations and exercises are being arranged to permit safe passage of vessels. Operations will be conducted in accordance with International Association of Lighthouse Authorities Maritime Buoyage System. Hydrographic Publications 1 and 2 should be consulted for details of buoyage system. Buoys and other aids to navigation are subject to set and will be moved from their charted positions. Mariners are requested to report any aids which are missing, damaged, or not functioning properly to the Commander, Fourteenth Coast Guard District, Honolulu, Hawaii 96850.

Boundary lines of Submerged Federal Lands Authority are shown thus: Lines of Submerged Federal Lands Authority are subject to change. Vessels should navigate with caution. During hours of darkness, vessels should keep well clear of Naval Danger Areas lying in range and may be ordered to leave.

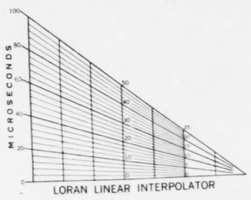
LORAN-C
GENERAL EXPLANATION
LORAN-C FREQUENCY 100kHz
PULSE REPETITION INTERVAL
49W 49,900 Microseconds
STATION TYPE DESIGNATORS (Not individual station letter designators)
M ..... Master
W ..... Secondary
X ..... Secondary
Y ..... Secondary
Z ..... Secondary
EXAMPLE 4990-X

RATES ON THIS CHART
4990- X 4990-Y

RADAR REFLECTORS
Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

CAUTION
Temporary changes or defects in aids to navigation are not indicated on this chart. See Notice to Mariners.

This chart has been prepared for use with ground wave signals. Skywave corrections are not provided. The Loran-C lines of position on this chart are compensated for propagation delay.



LORAN LINEAR INTERPOLATOR

UNITED STATES
HAWAII

HAWAIIAN ISLANDS

Mercator Projection
Scale 1:600,000 at Lat. 20°31'
World Geodetic System 1984
(North American Datum of 1983)

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

Formerly C&GS 4102, 1st Ed., Mar. 1972 C-1912-115

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1)

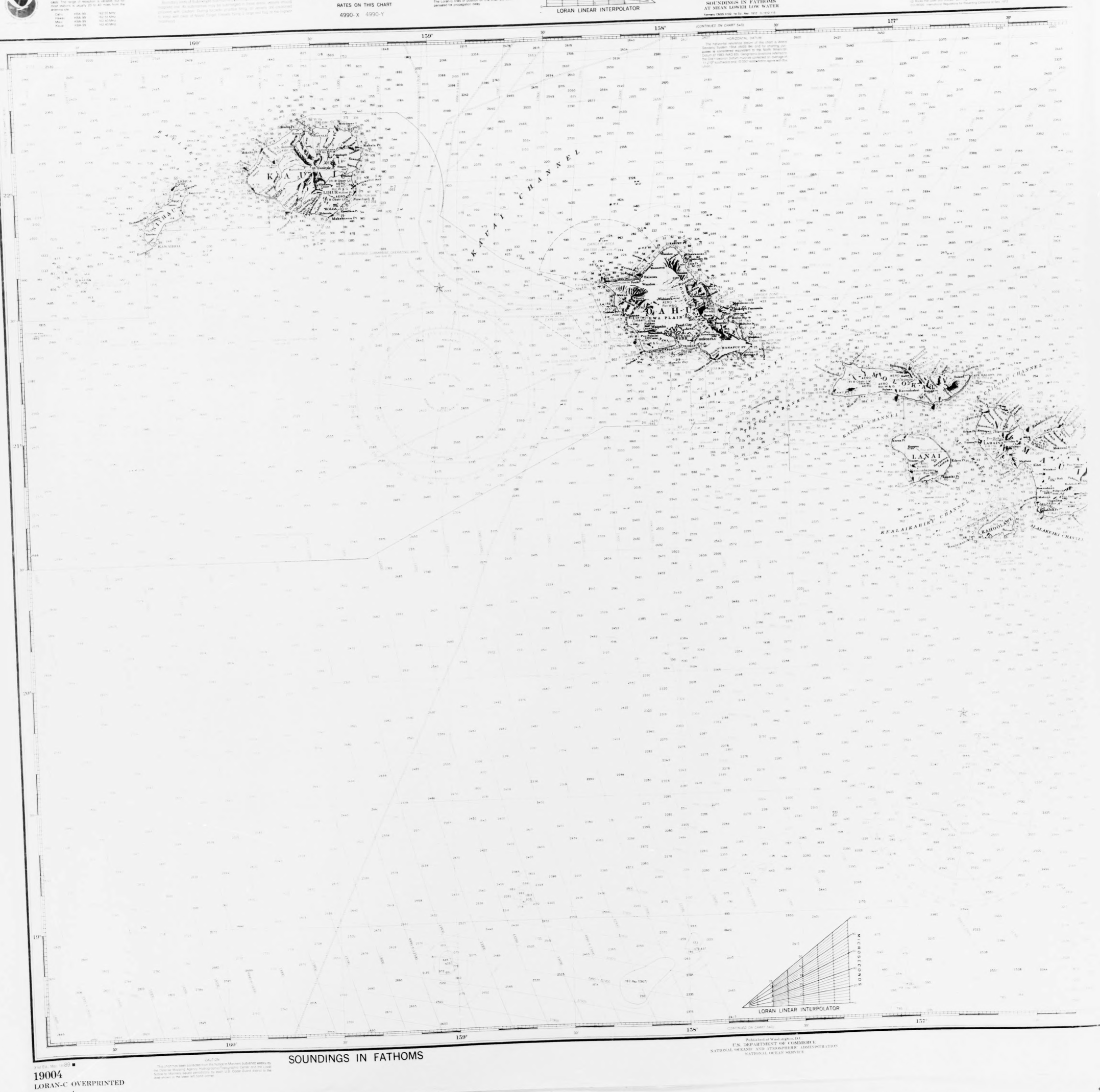
Aids to Navigation (lights are white unless otherwise indicated)
AERO (aeronautical)
Al. (alternating)
Bn. (beacon)
C. (can)
DIA. (diaphone)
F. (fixed)
Fl. (flashing)
Mo. (monthly)
Obscd. (obscured)
Occas. (occasional)
Oc. (occulting)
Q. (quick)
R. (red)
Ra. (radar)
Ra Ref. (radar reflector)
Ra Sta. (radar station)
Vis. (visibility)
W. (white)
Y. (yellow)

Bottom characteristics
Bldr. (boulders)
Sh. (shells)
Co. (coral)
Gvl. (gravel)
M. (mud)
Rk. (rock)
S. (sand)
Sh. (shells)

Miscellaneous
Abnd. (abandoned)
Dep. (depth)
Dest. (destroyed)
Dis. (distance)
Ext. (extinguished)
Fl. (flashing)
Intens. (intensified)
Intermit. (intermittent)
Irreg. (irregular)
Obscd. (obscured)
Occas. (occasional)
Part. (partially)
Perm. (permanent)
Prin. (principal)
Rep. (reported)
Vert. (vertical)

HORIZONTAL DATUM
The horizontal reference datum of this chart is World Geodetic System 1984 (WGS 84) and for charting (or plotted or considered equivalent to the North American Datum of 1983 (NAD 83). Geographic positions referred to the Old Hawaiian Datum must be corrected (or charged) by 11.2" (0" southward and 0.3"(0") eastward to agree with this datum.

(CONTINUED ON CHART 5401)



SOUNDINGS IN FATHOMS

CAUTION
This chart has been corrected from the Notice to Mariners published weekly by the Defense Mapping Agency Hydrographic/Topographic Center and the Local Notice to Mariners issued periodically by each U.S. Coast Guard district to the date shown in the lower left hand corner.

31st Ed., Mar. 89 ■
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U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

HE 418/7: 19004

UNITED STATES

HAWAII

HAWAIIAN ISLANDS

Mercator Projection
Scale 1:600,000 at Lat. 20°31'
World Geodetic System 1984
(North American Datum of 1983)

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

Formerly C&GS 4102, 1st Ed., Mar. 1972, C-1972-115

SOUNDINGS IN FATHOMS

Nautical Chart Catalog No. 2 Panels B, C, E

LORAN LINEAR INTERPOLATOR

MICROSECONDS

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplementary information concerning aids to navigation.

HEIGHTS

Heights in feet above Mean High Water.

AUTHORITIES

Hydrographic and topographic by the National Ocean Service, Charting and Geodetic Services, with additional data from the U.S. Coast Guard. Aerial Mapping Agency, and Geological Survey.

CAUTION

Only marine radiobeacons have been calibrated for accuracy. Limitations on the use of certain other radio signals in aids to marine navigation can be found in the U.S. Coast Guard Light Lists and Defense Mapping Agency Publication 117.

Radio direction-finder bearings to commercial broadcast stations are subject to error and should be used with caution.

Satellite positions are shown thus ⊕ (Approximate position).

NOTE S

Regulations for Ocean Dumping Sites are contained in 40 CFR, Parts 220-229. Additional information concerning the regulations and requirements for use of the sites may be obtained from Environmental Protection Agency (EPA). See U.S. Coast Pilots appendix for addresses of EPA offices.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or revisions to Chapter 2 are published in the Notices to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 14th Coast Guard District in Honolulu, Hawaii, or at the Office of the District Engineer, Corps of Engineers in Honolulu, Hawaii.

Refer to charted regulation section numbers.

NOTE C

PROHIBITED AREAS

Pearl Harbor
Kaneohe Bay

Regulations are published in Chapter 16, U.S. Coast Pilot 7.

NOAA nautical charts are constructed to exacting standards and are designed to promote safe navigation. Since our waterways are subject to continual change, the National Ocean Service encourages chart users to submit corrections or comments for the improvement of this product to the Director, Charting and Geodetic Services (N/CG22), National Ocean Service, NOAA, Rockville, Maryland 20852. By working together, we can make our activities safer and more enjoyable.

Thomas J. Maginnis
Assistant Administrator for Ocean Services
and Coastal Zone Management

(CONTINUED ON CHART 540)

HORIZONTAL DATUM

The horizontal reference datum of this chart is World Geodetic System 1984 (WGS 84) and for charting purposes is considered equivalent to the North American Datum of 1983 (NAD 83). Geographic positions referred to the Old Hawaiian Datum must be corrected an average of 11.2" southwards and 10.0287 eastwards to agree with this chart.

KAUAI CHANNEL
KAIWI CHANNEL
PAILOLO CHANNEL
KEALAIKAHIKI CHANNEL
KAHOOLAWE
ALALAKEIKI CHANNEL
ALENUIHAHA CHANNEL
KAUAI
OAHU
MOLOKAI
LANAI
MAUI
HAWAII
PEARL HARBOR
HONOLULU
MARAPUU PT.
KAWAIHAE BAY
HILO BAY
HILO
KEAHOLE PT.
KALAE
CAPE KUMUKAHI
MAUNA KEA
MAUNA LOA
KILAUEA CRATER

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U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

(Hawaiian Islands)

SOUNDING IN FATHOMS SCALE 1:600,000

19004

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